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Background of the Invention

Not attainable

heretofore by prior art workers

a are hillside-stable powerably-motivated lawnmowers of the rider-type
and of the walkbehind-type and, inter alia, lacking efficient sideward
ejection of grass clippings from the shrouded grass-cutting blades, easy
and effortless height-control for the shrouded grass-cutting blades,
general compactness and low center-of-gravity for the lawnmower, and oth-
a er disadvantages and deficiencies for prior art powerably-motivated lawn
a mowers.

General Objectives of the Invention

To provide adequately serving and heretofore unattainable

a hillside-stable powerably-motivated lawnmowers of the rider-type and
and of the walkbehind-type and such improvements being directed, inter
alia, toward efficient sideward ejection of grass clippings from the
shrouded grass-cutting blades, easy and effortless height-control for
the shrouded grass-cutting blades, and other structural advantages pro-
a moting compactness and lower center-of-gravity for various powerably-
a motivated lawnmowers

General Statement of the Invention

a With the aforementioned General Objectives in view, and together with other related and ancillary objectives which will become more apparent as the ensuing definitive description proceeds, the improved "hillside-stable powerably-motivated lawnmowers" concept of the present invention generally comprises: centrally therealong: a rearward engine actuatably powerably connected to a plurality of angularly-unidirectionally rotatable grass-cutting blades overlying a mowable grassy terrain and enclosed within a shroud having a horizontal topical-deck with downward peripheral walls having a transversely offset sideward-opening for grass cuttings ejection and also being internally provided with upright baffling adapted to efficiently eject grass cuttings through the sideward-opening; operationally accessible to the lawnmower operator, a two-heights shroud-height control selectively governing the shroud's transport and grass-cuttings heights through novel frame/lever/pins arrangement; and

desireably also, wherein the engine-motivation is beltswise through an inter-belts-pulley for between engine-drive-belt and a blades-drive-belt (for the grass cutting blades); and especially toward the objective of compact and low center-of-gravity "rider-type hillside-stable powerably-motivated lawnmowers", ^{strategically and preferably} rearwardly positioned hydraulic pumps thereat provided with plural-V-belt interaction. GWB 11/13/95 JCC 11/13/95

Brief Description of the Drawing

In the drawing, wherein like characters refer to like parts in the several views, and in which:

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Figure 1 is a longitudinal side elevational view of an embodiment 9 for a rider-type rendition representation of the "hillside-stable powerably-motivated lawnmower" concept of the present invention and extending directionally longitudinally along an upright central-plane 9A and comprising therealong: a rearwardly positioned motive engine 10; a rider's seat 15; a forward shroud 20 for enclosing a plurality of horizontal grass-cutter blades (24) overlying a mowable grassy terrain 8; uniquely-positioned inter-belts-pulleys arrangement 30 rearwardly attached to the shroud and inter-acting between engine-drive-belt (19) and pulleys blades-drive-belt (29); operationally accessible to an occupiable rider's seat(15), a unique shroud-height control means (40); and optionally desireably also, for strategically -located hydrostatic pumps, a novel plural-V-belt (55) therefor;

Figure 2 is an upwardly extending plan view taken along line 2-2 of Figure 1;

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Figure 3 is a detail sectional elevational view taken along lines 3-3 of Figures 2 and 3A and directed specifically to a said inter-belts-pulleys arrangement (30) for a said representative rider-type rendition 9 of said "hillside-stable powerably-motivated lawnmower" general concept;

Figure 3A is a downwardly extending plan view taken along line 3A-3A of Figure 1;

Figure 4 is an elevational view of the said shroud-height control means;

Figure 4A is a sectional view taken along line 4A-4A of Figure 4;

Figure 5 is a forwardly extending plan view as seen from lines 5-5 of Figure 1 and directed toward the said optionally desireable plural-V-belt-interaction 50 referred to hereabove; and

Figure 5A is a sectional elevational view taken along lines 5A-5A of Figure 5.

Detailed Description of the Drawing

Turning initially to drawing Figure 1 that schematically refers to a longitudinally extending side elevational view of a representative rider-type embodiment 9 of the "hillside-stable powerably-motivated lawnmower" concept of the present invention and extending longitudinally front-to-rear along an upright central-plane 9A: Representative embodiment 9 comprises along central-plane 9A: a rearwardly positioned motive engine 10; a rider's seat 15 positioned forwardly of engine 10; a forward and downwardly extending shroud 20 enclosing therewithin horizontal and angularly-unidirectional grass-cutter blades (24A, 24B, 24C) in overlying relationship to a grassy mowable terrain (8) and strategically enabled (23) to efficiently transversely eject (22E) therefrom; a uniquely positioned (21R, 22R) shroud-attached inter-belts-transmission (30) between engine-belt-drive (19) and blades-drive-belt(29) at a said shroud (20), a shroud-height control (40); and for a rearwardly employable hydrostatic power means (50), a plural-V-belt (55) extending therefor.

Referring now more specifically to drawing Figures 2 and 3A, a such shroud structure 20 for enclosing therewithin horizontally extending rotatable grass-cutter blades (e.g. 24A, 24B, 24C) actuatably overlying a mowable grassy terrain 8 and for strategically (23) efficiently ejecting grass-cuttings from the shroud's transversely-offset sideward-opening (22E): Enclosed within a such peripherally-walled (22, 22F, 22R) shroud

20 and located in horizontal parallelism below a horizontal topical-deck 21 therefor (having peripherally vertical-walls 22) is a plurality of such horizontal rotatable grass-cutter blades (e.g. 24A, 24B, 24C) respectively rotatably circularly-traceable as shown in Figure 2 phantom-lines and which circular-tracings are respectively at least partially surrounded by vertical -bafflings 23 depending from topical-deck 21. Each such grass-cutter blade 24 has a vertical-shaft extending journably through topical-deck 21 and having thereatop a blades-pulley respective blades-drive-pulleys (eg. 25A, 25B, 25C). And atop topical-deck 21 there are desireably also deck-idler-pulleys (26) and an endless blades-drive-belt 29, emanating from inter-belts pulley means 30 and extending around said elements 25 and 26 as indicated in Figure 3A, to ensure that the blades 24 commonly rotate in the curved-arrows direction of Figure 2. And whereby, in connection with such vertical-bafflings 23, and as also indicated by the Figure 2 curved-arrows and the parallel double-phantom arrows, grass cuttings (8) will be effectively, efficiently, and strategically directionally transversely ejected through the shroud's single transversely-offset sideward-opening 22E.

Drawing Figures 3 and 3A particularly depict such inter-belts-pulleys arrangement 30 (e.g. extending between said endless blades-drive belt 29 and an endless engine-drive-belt 19) attached to said shroud 20 (e.g. at 21R) and preferably having a low-elevation thereto consonant with the "compact rider-type lawnmower" objectives of

of the present invention. For example such shroud 20 at a topical-deck 21, immediately adjacent a shroud depending peripherally-vertical rear-wall 22R, is cutaway 21R, and thereat is provided with such inter-belts-pulleys arrangement (30), as follows: Such arrangement (30) might comprise a C-shaped bracket 31 having vertical-arm 31V attached to shroud rear-wall 22R and also having horizontal-arms 31A and 31B journalling (32A, 32B) an upright shaft 33 carrying an upper-sheave pulley (34) (for blades-drive-belt 29) and a lower-sheave pulley (35) (for engine-drive-belt 19), and preferably also a lower-sheave pulley 35, is positioned immediately at, or preferably below, the shroud's horizontal topical-deck 21.

The shroud-height control 40 might be summarily described, as follows: Extending curvilinearly upwardly/rearwardly from the lawnmower structure and at a directionally -transverse shaft 41, there is a dualy armed (45A, 45B) frame provided with transverse-holes 46 and which frame encloses therewithin an upright operationally-motivated lever 49 which is operationally connected (e.g. thru chains 43 and topical-deck

brackets 44) to shroud topical-deck 21. A pin 48 selectively positionable thru a frame transverse-hole (46) determines the lower-height grass-cutting elevation. But at at transporting and/or high-grass-cutting height, the lever (49) is located within a recessed portion (45C) of frame arm 45B.

If there exists a strategically, and preferably rearwardly positioned, lawnmower hydraulic pump means (e.g. 50 having pumps 51), a plural-V-belt transmission (55), as shown in Figures 5 and 5A is aptly employable.

Much of the foregoing description concerning the rider-type "hillside-stable powerably-motivated lawnmower" embodiment 9 is also analagously applicable to walkbehind-type lawnmower embodiments, and as suggested in the ensuing accompanying claims.

From the foregoing, the construction and operation of the "hillside-stable powerably-motivated lawnmowers" concept of the present invention will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and equivalents will readily occur to those skilled in the art, it is not desired to limit the invention to the exact constructions shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.